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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/667,204	09/18/2003	Rachel Yerushalmi-Rozen	7640-X03-011	7170

27317 7590 08/22/2007
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MIAMI, FL 33180

EXAMINER

MCCRACKEN, DANIEL

ART UNIT	PAPER NUMBER
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1754

MAIL DATE	DELIVERY MODE
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08/22/2007

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/667,204

Applicant(s)

YERUSHALMI-ROZEN ET AL.

Examiner

Daniel C. McCracken

Art Unit

1754

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,3-5 and 7-20 is/are pending in the application.
- 4a) Of the above claim(s) 12-20 is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1,3-5 and 7-11 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. ____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☐ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date ____.
- ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date ____.
- ☐ Notice of Informal Patent Application
- ☐ Other: ____.

DETAILED ACTION

Citation to the Specification will be in the following format (S. # : ¶) where # denotes the page number and ¶ denotes the paragraph number. Citation to patent literature will be in the form (Inventor # : LL) where # is the column number and LL is the line number. Citation to the pre-grant publication literature will be in the following format (Inventor # : ¶) where # denotes the page number and ¶ denotes the paragraph number.

Election/Restrictions

Applicant's election with traverse of Group I in the reply filed on 6/25/2007 is acknowledged. The traversal is on the ground(s) that "[c]laims 12-20 (in addition to claims 3-11) are believed to describe various aspects of the same invention: namely embodiments of the method of claims [sic] 1 or various uses of the non-tangled nanotubes prepared according to claim 1. This is not found persuasive because regardless of how Applicants have couched their preambles in terms of intended use, the groups set forth in the Final Rejection of 1/23/2007 still reflect properly restrictable subject matter for reasons of record. "Use claims" are generally disfavored, and the claims should be redrafted to fit one of the statutory subject matter classes as set forth in 35 U.S.C. §101. *See* MPEP 2173.05(q).

The requirement is still deemed proper and is therefore made FINAL.

Response to Arguments

Applicant's arguments with respect to all claims have been considered but are moot in view of the new ground(s) of rejection.

Request for Information

While ineligible as prior art under 35 U.S.C. 102, the Examiner considers *Bandyopadhyaya, et al., Stabilization of Individual Carbon Nanotubes in Aqueous Solutions*, Nano Letters 2002; 2(1): 25 (hereinafter “Bandyopadhyaya at ___”) to be highly relevant to Applicants disclosure. The authors of the Bandyopadhyaya article (which include the named inventors of the instant application) state “[t]he dispersion method is based on an ancient Egyptian recipe, first used 5000 years ago for preparation of carbon-black ink.” (Bandyopadhyaya at 25, col. 2) (footnote omitted). The footnote cited in Bandyopadhyaya refers to an article from *Encyclopedia Britannica* 257-259 (William Benton: Chicago, 1966). The Examiner’s efforts to located the *Encyclopedia Britannica* article have proven unsuccessful. As such, the Examiner requests the article be submitted in response to this Office Action. The Examiner considers it potentially material to patentability, based on the disclosure in the Bandyopadhyaya article.

Claim Rejections - 35 USC § 103

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

The references cited teach each and every limitation of the rejected claims. The pinpoint citations provided are in no way to be construed as limitations of the teachings of the reference, but rather illustrative of particular instances where the teachings may be found.

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Claims 1, 3-5, and 7-11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lai, et al., *Complexation of C₆₀ Fullerene with Cholesteryl Group-Bearing Pullulan in Aqueous Medium*, Chem. Ltrs. 2000: 64 (hereinafter "Lai at ___") in view of Ausman, et al., *Organic Solvent Dispersions of Single-Walled Carbon Nanotubes: Toward Solutions of Pristine Nanotubes*, J. Phys. Chem. B 2000; 104(38): 8911 (hereinafter "Ausman at ___").

With respect to Claim 1, Lai discloses a method of making an aqueous dispersion of C₆₀ fullerene in pullulan, a polysaccharide polymer. *See generally* (Lai at 64, col. 1). A mass ratio of 0.2 is recited. (Lai at 65, "Table 1"). Sonication is taught. (Lai at 64, col. 2). Lai does not recite the addition of "carbon nanotubes" to the dispersion. Ausman, et al. however identifies that "solution-phase handling [of carbon nanotubes] would be exceptionally useful." (Ausman at 8911, col. 1). Further, "[carbon nanotubes] have been solubilized in water with the aid of surfactants, and have even been purified and length-selected in this form, but removing the surfactant afterward is problematic." *Id.* (citations omitted). One would be motivated to combine the teachings of Ausman, et al. (i.e. using a "carbon nanotube" vs. "C₆₀") because of the promising applications recited in Ausman, as well as the ability to create a dispersion sans surfactant.

As to Claim 3-4, Lai discloses freeze drying (i.e. lyophilization), a method of water removal. As to Claim 5, it is expected that Lai recites the claimed limitations. As to Claims 7-8, gum arabic is a well-known polymer for creating stable aqueous dispersions. *See* (Connors col. 3-4). With respect to Claims 9-11, the product is necessarily taught where the process has been identified.

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Conclusion


All amendments made in response to this Office Action must be accompanied by a pinpoint citation to the Specification (i.e. page and paragraph or line number) to indicate where Applicants are drawing their support.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Daniel C. McCracken whose telephone number is (571) 272-6537. The examiner can normally be reached on Monday through Friday, 9 AM - 6 PM EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Stanley S. Silverman can be reached on (571) 272-1358. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.


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